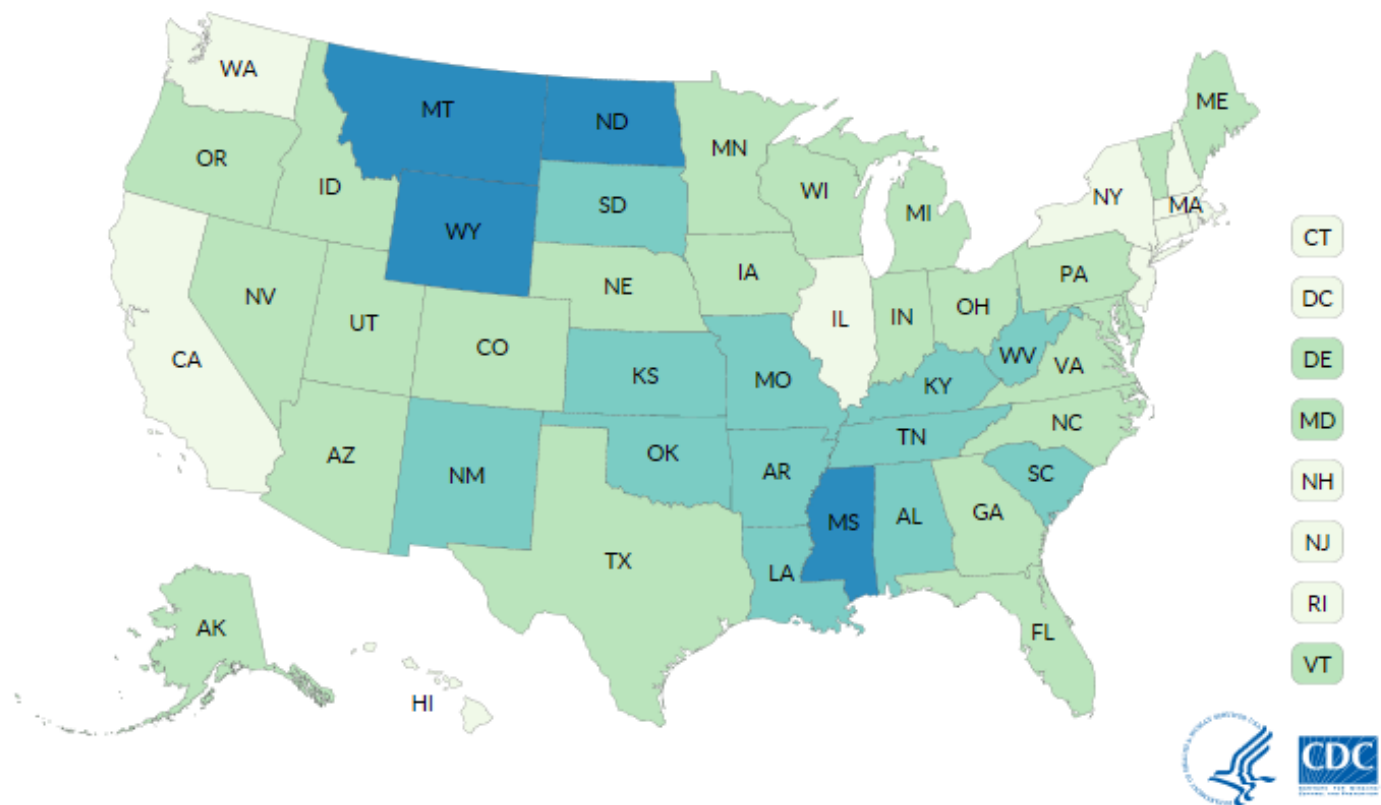


# Motor Vehicle Crash Data Injury Prevention Countermeasures

## Motor Vehicle Occupant Death Rates by State, 2012



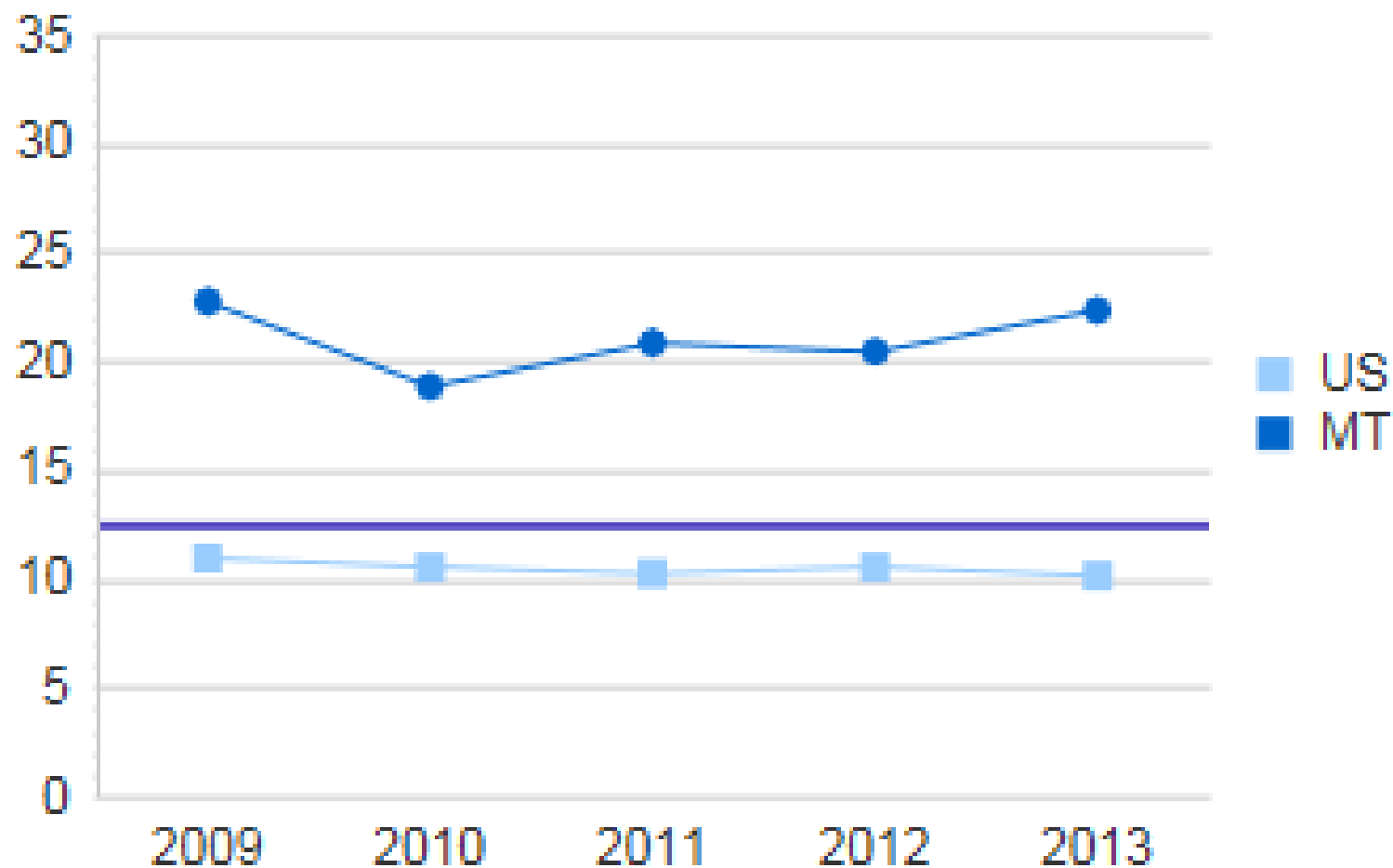
## About This Map

Rate of deaths by state (per 100,000 population) for motor vehicle occupants killed in crashes, 2012. Source: Fatality Analysis Reporting System (FARS).

Note: Cells with a value of zero indicate data are suppressed. Fatality rates based on fewer than 20 deaths are suppressed.

- 0 - <5.1
- 5.1 - <10.1
- 10.1 - <15.1
- 15.1 - 20.2

# Age-adjusted motor vehicle-related death rate (per 100,000 population)



Source: National Highway Traffic Safety Administration (4).  
HHS Healthy People 2020 Target: 12.4/100,000 (purple line) (5)

# MONTANA MOTOR VEHICLE DEATH RATE

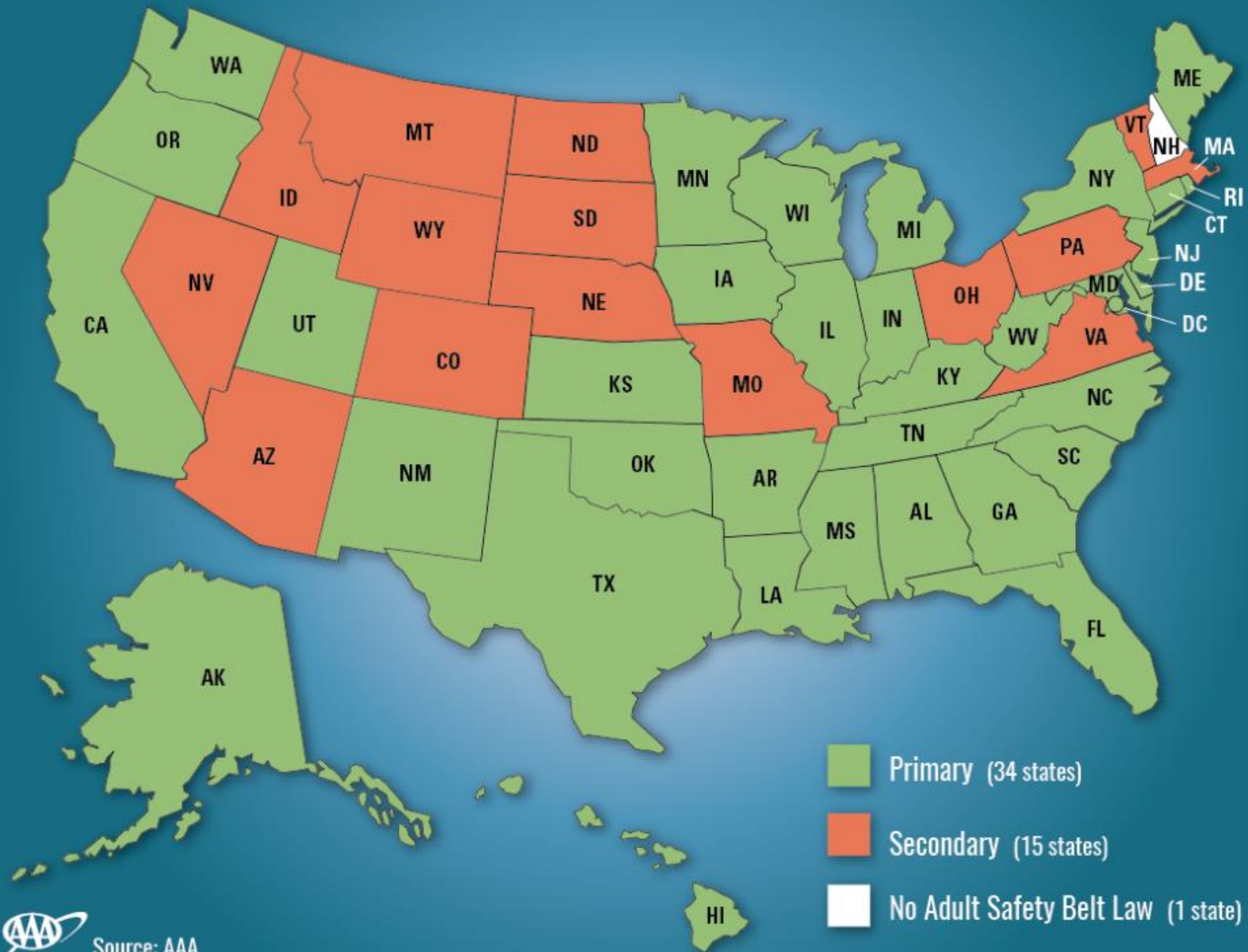
Deaths Due to Motor Vehicle Accidents per 100,000 Population



## States ▼▲



# State Seat Belt Laws: Front Seat Enforcement



Source: AAA

# Seat Belt Policy Rating

Rating	State seat belt law
Green	Primary enforcement law covering all seating positions
Yellow	Primary enforcement law covering only the front seats
Red	Secondary enforcement law OR no law

# Seat Belt Use in 2014

- Nationally: 87%
- Primary Enforcement States: 90%
- Secondary Enforcement States: 79%
- Montana: 72%

# Primary Seat Belt Enforcement

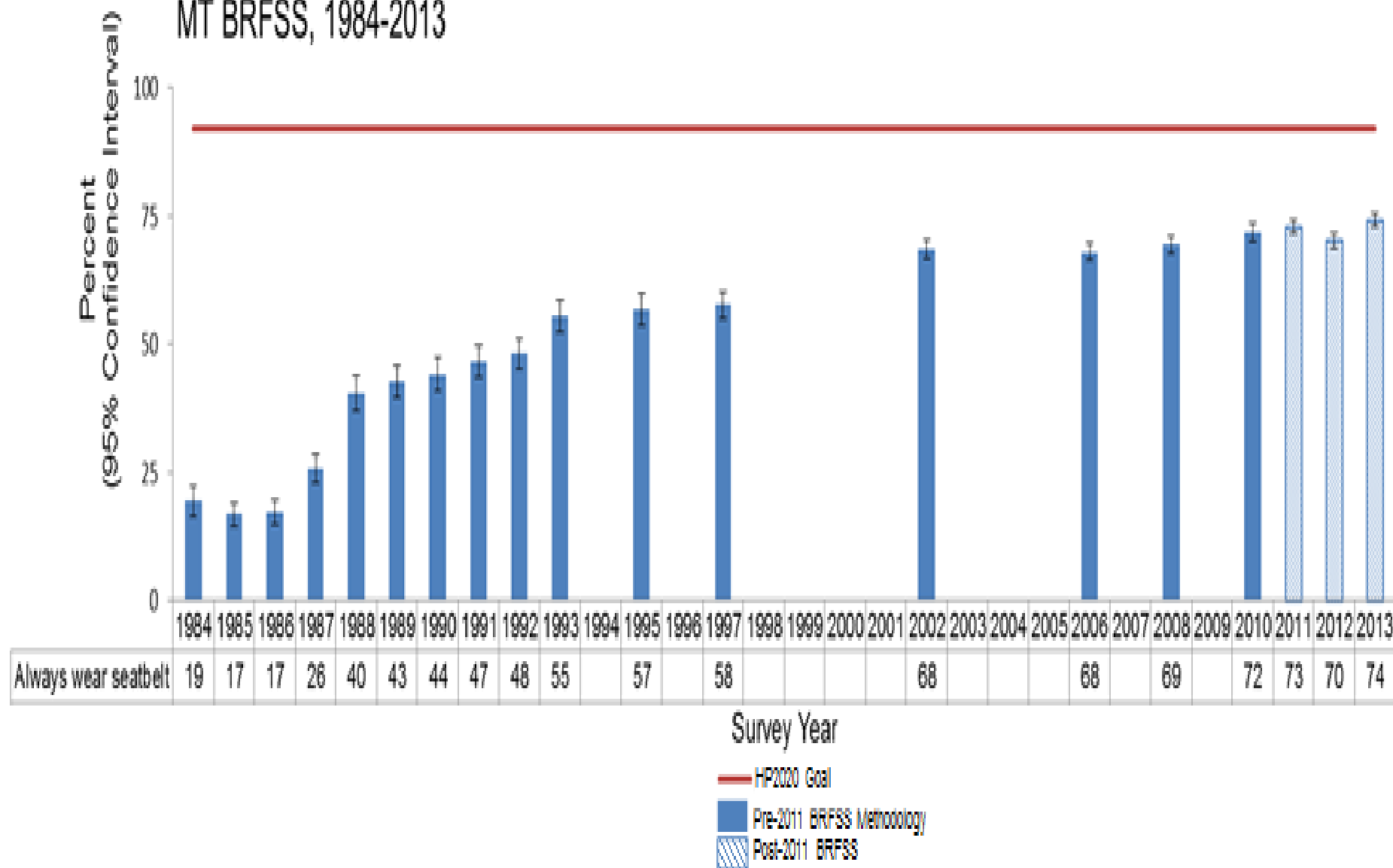
## 1. Seat Belt Use Laws

Countermeasure	Effectiveness	Cost	Use	Time
1.1 State primary enforcement seat belt use laws	★ ★ ★ ★ ★	\$	Medium	Short
1.2 Local primary enforcement seat belt use laws	★ ★ ★ ★	\$	Low	Short
1.3 Increased seat belt use law penalties	★ ★ ★ ★ <sup>†</sup>	\$	Low	Short

<sup>†</sup>Effectiveness has been demonstrated for increased fines but has not yet been demonstrated for driver's license points.



# Percent of adults who report always wearing a seatbelt while driving or riding in a car, MT BRFSS, 1984-2013



# Primary Seat Belt Enforcement

- Recent study released August 2015 found states with primary seat belt have higher seat belt use and lower fatality rates
- 2001- 16 states had primary law- 14.6/100,000 fatality rate
- 2010- 33 states had primary law-
- 9.7/100,000 fatality rate
- Changing from Secondary to Primary have shown 8-18% increase in seat belt use and 7-8% reduction in fatalities.

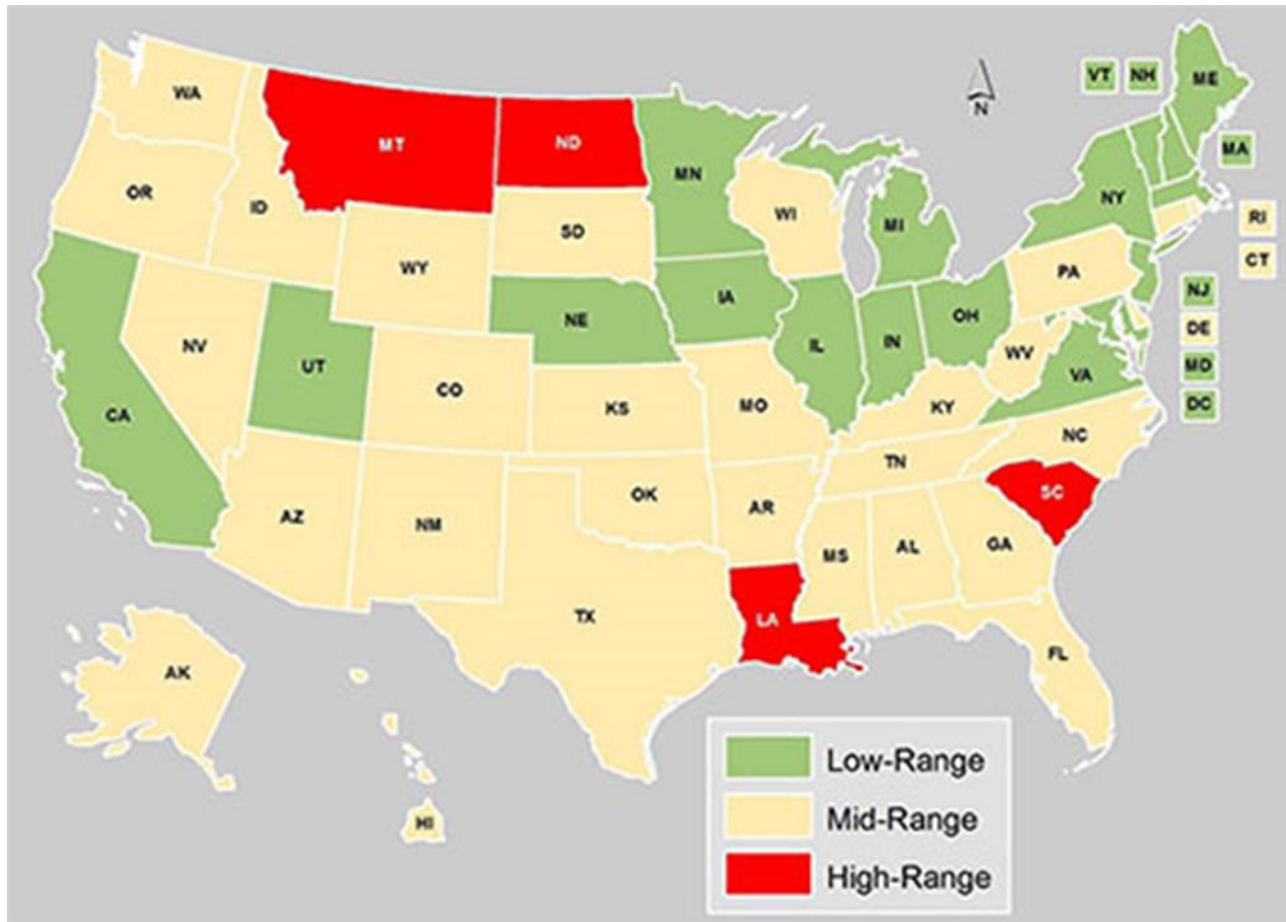
# Local Primary Enforcement

- In some States with secondary enforcement belt use laws, individual communities have enacted and enforced community-wide primary laws or ordinances.
- These laws differ from statewide laws only in that they are enacted, publicized, and enforced locally.
- Studies show 5% increase in seat belt use in local enforcement communities, while showing a slight decrease of 2% in control communities with secondary enforcement.

# Increasing Seat Belt Fine

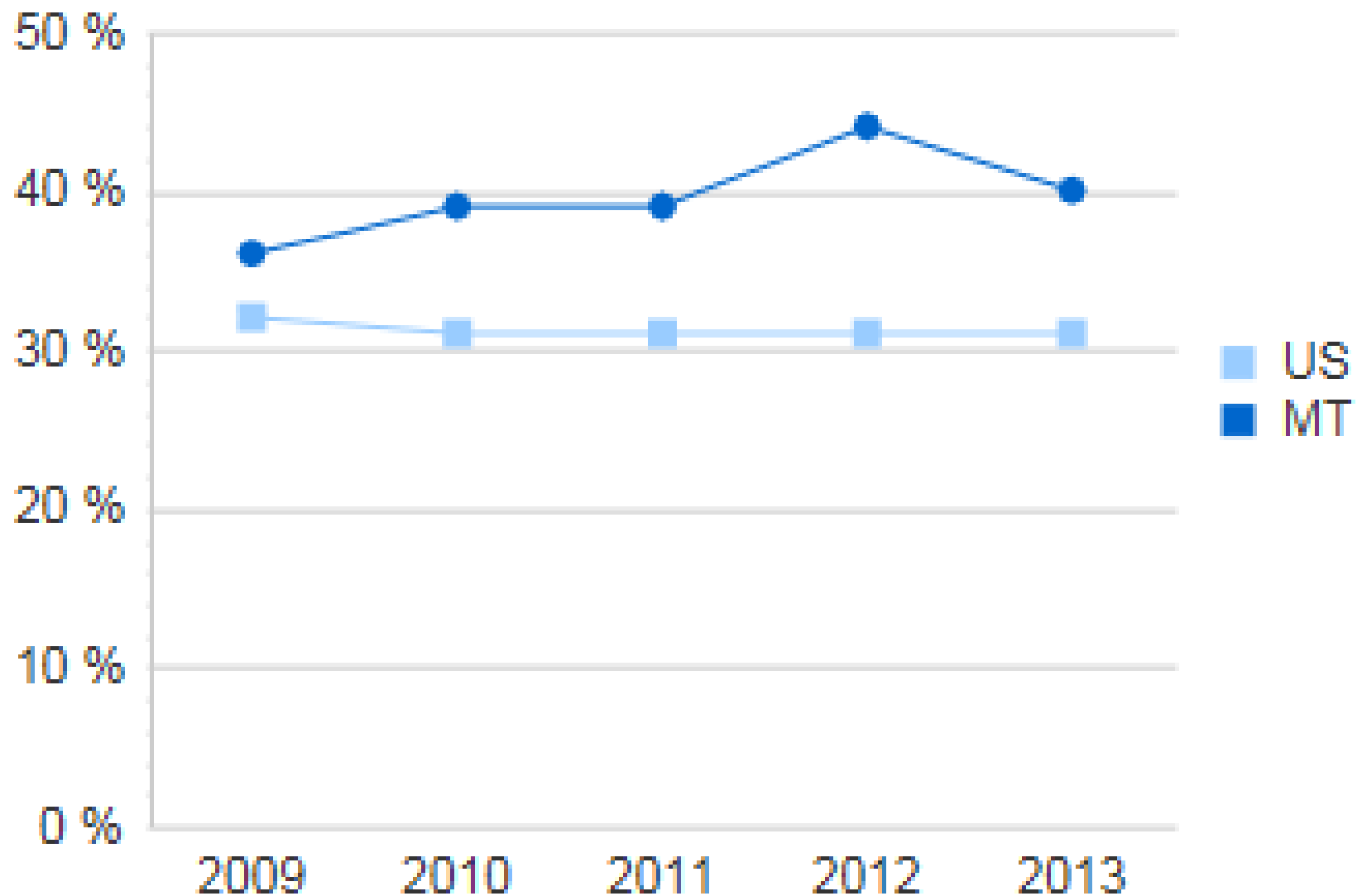
- As of August 2014, a violation resulted in a typical fine of \$25 or more in all but 15 States (IIHS, 2014)
- Montana has a \$20 fine
- Low fines may not convince nonusers to buckle up and may also send a message that belt use laws are not taken seriously.
- Studies show raising fine from \$25 to \$60 increase seat belt use 3-4%
- Raising fine from \$25 to \$100 increase seat belt use 6-7%

Montana has one of the highest fatality rates in the nation for number of deaths caused by impaired drivers



Source: National Transportation Safety Board Safety Report - May 2013

## Percentage of crash-related deaths that involved alcohol-impaired drivers



Source: National Highway Traffic Safety Administration (8)

Crash Description -----&gt;

County -----&gt;

# Impaired Driver Involved Crash - Driver (Alcohol or Alcohol/Drugs) Statewide



<b>Injury Severity</b>	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Fatality	109	101	110	92	101	86	86	103	100	77
Serious Injury	413	457	403	377	289	284	250	326	268	247
Other Injury	1120	1250	1269	1191	994	971	947	998	754	881
No Injury	1971	2078	2073	2184	2151	1940	1963	1897	1801	1888
Unknown/Other	51	56	76	116	137	91	264	151	95	104
<b>Total</b>	<b>3664</b>	<b>3942</b>	<b>3931</b>	<b>3960</b>	<b>3672</b>	<b>3372</b>	<b>3510</b>	<b>3475</b>	<b>3018</b>	<b>3197</b>

<b>Crash Severity</b>	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Fatal Crash	92	91	99	83	90	74	75	95	84	74
Serious Injury Crash	293	324	296	270	215	214	179	227	186	192
Other Injury Crash	705	736	751	760	667	581	604	643	522	581
No Injury Crash	941	975	976	1035	1032	927	942	918	893	939
Unknown/Other Crash	21	31	40	55	44	44	83	59	50	51
<b>Total</b>	<b>2052</b>	<b>2157</b>	<b>2162</b>	<b>2203</b>	<b>2048</b>	<b>1840</b>	<b>1883</b>	<b>1942</b>	<b>1735</b>	<b>1837</b>

# High Visibility Enforcement

## 2. Deterrence: Enforcement

Countermeasure	Effectiveness	Cost	Use	Time
2.1 Publicized sobriety checkpoints	★★★★★	\$\$\$	Medium	Short
2.2 High visibility saturation patrols	★★★★	\$\$	High	Short



# Sobriety Checkpoints

- Certain countermeasures have been shown to reduce the rate of alcohol-impaired driving and alcohol-related crashes, including stronger impaired driving laws and increased use of high-visibility enforcement, such as sobriety checkpoints.
- Sobriety checkpoints are authorized in 38 States and the District of Columbia (NHTSA,2015).
- Not currently authorized in Montana

# Sobriety Checkpoints

- Publicized sobriety checkpoint programs are proven effective in reducing alcohol-related crashes among high risk populations including males and drivers 21 to 34
- Sobriety Checkpoints
  - Reduce Fatal impaired crashes by 9%
  - Reduce all impaired crashes by 17%

# High Saturation Enforcement

- States where sobriety checkpoints are prohibited often use High Saturation Enforcement
- Studies show a decline in fatal impaired driving crashes, but not a decline in impaired driving rate.

# Prevention Countermeasures

Countermeasure	Effectiveness	Cost	Use	Time
5.1 Alcohol screening and brief intervention	★ ★ ★ ★ ★	\$\$	Medium	Short
5.2 Mass-media campaigns	★ ★ ★	\$\$\$	High	Medium
5.3 Responsible beverage service	★ ★	\$\$	Medium	Medium
5.4 Alternative transportation	★ ★	\$\$	Unknown	Short
5.5 Designated drivers	★ ★	\$	Medium	Short

# GET YOUR LIFE AND YOUR HEALTH BACK IN FOCUS



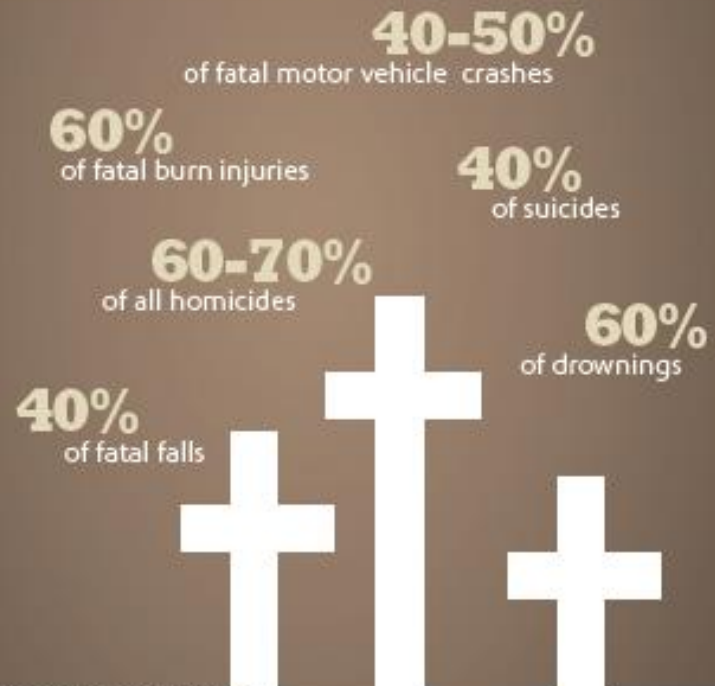
THERE IS HELP

## THE IMPACT OF ALCOHOL

Most of us don't have a clear picture of how alcohol can impact our lives and our health. You don't have to be an alcoholic to be at risk for alcohol-related health problems.

To get your risk into focus, consider these guidelines for low-risk drinking, which is defined as having no more than two drinks a day for men and one for women. If your drinking is at a higher level, your risk for harm increases dramatically.

### ALCOHOL IS A FACTOR IN:<sup>3</sup>



3. Academy of Emergency Medicine.

# Screening Brief Intervention

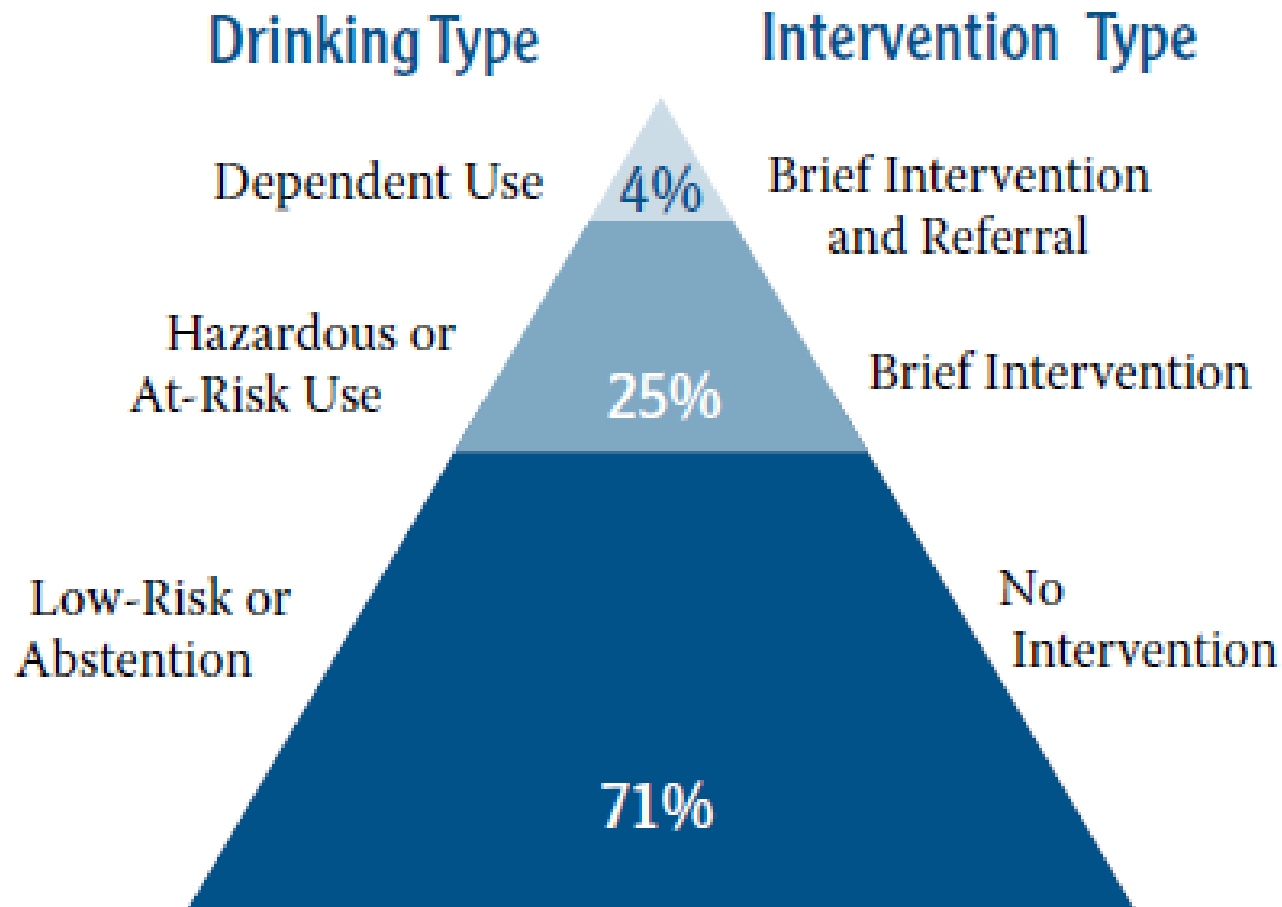
- Approximately one-half of trauma centers screen patients for alcohol problems and one third use some form of brief intervention
- Alcohol screening and brief interventions also are used in colleges, primary care medical facilities, and social service settings
- Studies generally found that alcohol screening and brief interventions reduced both drinking and alcohol-related traffic crashes and injuries.

# ACS

- American College of Surgeons Committee on Trauma  
“Trauma centers can use the teachable moment generated by the injury to implement an effective prevention strategy, for example, alcohol counseling for problem drinking.”
- SBI is now required by ACS for all Level I and Level II Trauma Centers
- In addition, Level I centers must have the capability to provide an intervention for patients identified as problem drinkers.
- Brief interventions in trauma centers have been shown to reduce trauma recidivism by 50%

# The Pyramid of Alcohol Use in the US

Figure 1: Pyramid of Alcohol Problems<sup>1,2</sup>





# Screening

- Screening Tools:
  - NIAAA Quantity & Frequency Questions
  - CAGE, T-ACE
  - AUDIT
  - DAST-10
  - CRAFFT

# Quantity & Frequency



## NIAAA Quantity & Frequency Screening Tool

### Questions

1. On average, how many days per week do you drink alcohol?
2. On a typical day when you drink, how many drinks do you have?
3. What's the maximum number of drinks you had on a given occasion in the last month?

### Positive Screen

Person is at risk if he/she drinks at levels higher than outlined below:

	Per Week	Per Occasion
MEN	> 14 drinks	> 4 drinks
WOMEN	> 7 drinks	> 3 drinks
AGE >65	> 7 drinks	> 3 drinks

Optional: To identify those who do not drink regularly (fall below NIAAA guideline), but binge drink sometimes, you could ask this question to identify if the person is an at-risk drinker:

**In the last year, did you drink more than 5 drinks on one occasion (men), 4 drinks on one occasion (women and ages 65+)?**

A positive response would indicate the person could benefit from a brief alcohol intervention.

# CAGE Questionnaire

- In the last 12 months:
  - Have you felt you ought to CUT down on your drinking use?
  - Have people ANNOYED you by criticizing your drinking use?
  - Have you ever felt GUILTY about your drinking use?
  - Have you ever had a drink first thing in the morning (EYE OPENER) to steady your nerves, get rid of a hangover, or get your day started?

# Interpretation of CAGE Answers

- Scenario 1: A person is an **at-risk non dependent** drinker if he/she has one positive response
- Scenario 2: A person is identified as a **potentially dependent drinker** if he/she has a positive response to:
  - The CAGE “eye-opener” question, or
  - Two or more CAGE question



# AUDIT Screening Tool

## The Alcohol Use Disorders Identification Test: Interview Version

Read questions as written. Record answers carefully. Begin the AUDIT by saying "Now I am going to ask you some questions about your use of alcoholic beverages during this past year." Explain what is meant by "alcoholic beverages" by using local examples of beer, wine, vodka, etc. Code answers in terms of "standard drinks". Place the correct answer number in the box at the right.

<p>1. How often do you have a drink containing alcohol?</p> <p>(0) Never [Skip to Qs 9-10]            (1) Monthly or less            (2) 2 to 4 times a month            (3) 2 to 3 times a week            (4) 4 or more times a week</p> <div style="text-align: right;"><input type="text"/></div>	<p>6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?</p> <p>(0) Never            (1) Less than monthly            (2) Monthly            (3) Weekly            (4) Daily or almost daily</p> <div style="text-align: right;"><input type="text"/></div>
<p>2. How many drinks containing alcohol do you have on a typical day when you are drinking?</p> <p>(0) 1 or 2            (1) 3 or 4            (2) 5 or 6            (3) 7, 8, or 9            (4) 10 or more</p> <div style="text-align: right;"><input type="text"/></div>	<p>7. How often during the last year have you had a feeling of guilt or remorse after drinking?</p> <p>(0) Never            (1) Less than monthly            (2) Monthly            (3) Weekly            (4) Daily or almost daily</p> <div style="text-align: right;"><input type="text"/></div>
<p>3. How often do you have six or more drinks on one occasion?</p> <p>(0) Never            (1) Less than monthly            (2) Monthly            (3) Weekly            (4) Daily or almost daily</p> <p><i>Skip to Questions 9 and 10 if Total Score for Questions 2 and 3 = 0</i></p> <div style="text-align: right;"><input type="text"/></div>	<p>8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?</p> <p>(0) Never            (1) Less than monthly            (2) Monthly            (3) Weekly            (4) Daily or almost daily</p> <div style="text-align: right;"><input type="text"/></div>
<p>4. How often during the last year have you found that you were not able to stop drinking once you had started?</p> <p>(0) Never            (1) Less than monthly            (2) Monthly            (3) Weekly            (4) Daily or almost daily</p> <div style="text-align: right;"><input type="text"/></div>	<p>9. Have you or someone else been injured as a result of your drinking?</p> <p>(0) No            (2) Yes, but not in the last year            (4) Yes, during the last year</p> <div style="text-align: right;"><input type="text"/></div>
<p>5. How often during the last year have you failed to do what was normally expected from you because of drinking?</p> <p>(0) Never            (1) Less than monthly            (2) Monthly            (3) Weekly            (4) Daily or almost daily</p> <div style="text-align: right;"><input type="text"/></div>	<p>10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?</p> <p>(0) No            (2) Yes, but not in the last year            (4) Yes, during the last year</p> <div style="text-align: right;"><input type="text"/></div>
<p>Record total of specific items here <input type="text"/></p> <p><i>if total is greater than recommended cut-off, consult User's Manual.</i></p>	

# AUDIT

AUDIT Screening Results	
Hazardous Use	Score 8—15 (for men) Score 7—15 (for women)
Harmful Use	Score 16—19
Possible Dependence	Score $\geq$ 20



# CRAFFT Screening Tool

This screening tool is encouraged for identifying risky drinking behaviors among adolescents.

## Questions

- Have you ever ridden in a **CAR** driven by someone (including yourself) who was "high" or had been using alcohol or drugs?
- Do you ever use alcohol or drugs to **RELAX**, feel better about yourself, or fit in?
- Do you ever use alcohol/drugs while you are by yourself, **ALONE**?
- Do your family or **FRIENDS** ever tell you that you should cut down on your drinking or drug use?
- Do you ever **FORGET** things you did while using alcohol or drugs?
- Have you gotten into **TROUBLE** while you were using alcohol or drugs?

# CRAFFT

## Positive Screen

**2 or more YES answers suggest the patient engages in risky drinking behaviors and would benefit from a brief intervention and referral to treatment.**



# DAST

**These questions refer to the past 12 months only.**

**YES NO**

1. Have you used drugs other than those required for medical reasons?.....
2. Do you abuse more than one drug at a time?.....
3. Are you always able to stop using drugs when you want to?.....
4. Have you had “blackouts” or “flashbacks” as a result of drug use?.....
5. Do you ever feel bad or guilty about your drug use?.....
6. Does your spouse (or parent) ever complain about your involvement with drugs?.....
7. Have you neglected your family because of your use of drugs?.....
8. Have you engaged in illegal activities in order to obtain drugs?.....
9. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?.....
10. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding etc...)?.....

\* **DAST Score**.....

\* See scoring instructions for correct scoring procedure

# DAST Scoring

<u>DAST-10 Score</u>	<u>Degree of Problem Related to Drug Abuse</u>	<u>Suggested Action</u>
0	No problems reported	None at this time.
1 – 2	Low Level	Monitor, reassess at a later date.
3 – 5	Moderate Level	Further investigation is required.
6 – 8	Substantial Level	Assessment required.
9 – 10	Severe Level	Assessment required.

# Brief Intervention

- Short 5-15 minute negotiated interview used to motivate a patient in changing his/her drinking patterns.
- Uses Motivational Interviewing (MI)
- Purpose is to:
  - Provide information and feedback about alcohol use
  - Understand patients view of drinking and enhancing their motivation to change
  - Provide clear and respectful professional advise
- Can be performed by RN's, MD's, Social Workers, Case Management, Trauma Coordinators

**12 fl oz of  
regular beer**

=

**8–9 fl oz of  
malt liquor**  
(shown in a  
12 oz glass)

=

**5 fl oz of  
table wine**

**1.5 fl oz shot of  
80-proof spirits**  
("hard liquor"—  
whiskey, gin, rum,  
vodka, tequila, etc.)



about 5%  
alcohol



about 7%  
alcohol



about 12%  
alcohol



about 40%  
alcohol

---

The percent of "pure" alcohol, expressed here as alcohol by volume (alc/vol), varies by beverage.

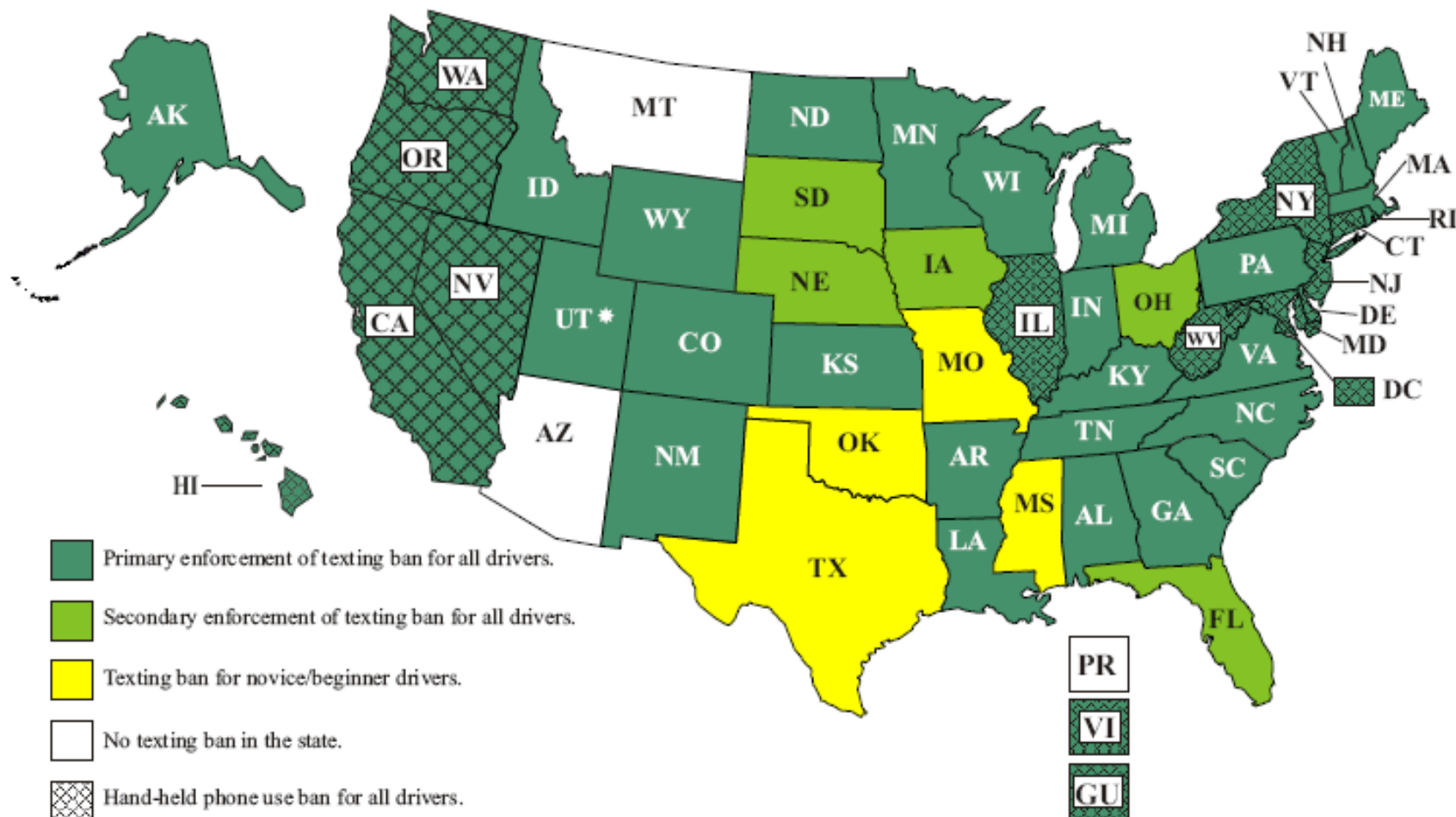
# Referral to Treatment

- Provide a list of local and national resources
- Provide educational material
- Discuss further follow-up with their primary care provider
- Consider including a referral to substance abuse specialist for brief interventions (1-5 sessions) or brief treatment (up to 12 sessions) or referral to specialty treatment
- <http://dphhs.mt.gov/amdd/SubstanceAbuse.aspx>
  - List of chemical dependency services in Montana

## Reimbursement for SBIRT

Payer	Code	Description	Fee Schedule
Commercial Insurance	CPT 99408	Alcohol and/or substance abuse structured screening and brief intervention services; 15 to 30 minutes	\$33.41
	CPT 99409	Alcohol and/or substance abuse structured screening and brief intervention services; greater than 30 minutes	\$65.51
Medicare	G0396	Alcohol and/or substance abuse structured screening and brief intervention services; 15 to 30 minutes	\$29.42
	G0397	Alcohol and/or substance abuse structured screening and brief intervention services; greater than 30 minutes	\$57.69
Medicaid	H0049	Alcohol and/or drug screening	\$24.00
	H0050	Alcohol and/or drug screening, brief intervention, per 15 minutes	\$48.00

# Cell Phone Use and Texting While Driving Laws



\*Utah considers speaking on a cell phone without a hands-free device to be an offense only if a driver also is committing some other moving violation (other than speeding).

**Note:** Many states that have passed hand-held phone bans and texting bans provide for various exemptions for emergencies, law enforcement personnel, emergency medical technicians, firefighters, state DOT employees, etc.

Source: National Conference of States Legislatures, 2014.

# Distracted Driving Countermeasures

Countermeasure	Effectiveness	Cost	Use	Time
1.1 GDL requirements for beginning drivers	★ ★ ★ ★ ★ <sup>†</sup>	\$	High	Medium
1.2 Cell phone and text messaging laws	★ ★	\$	Medium	Short
1.3 High visibility cell phone/text messaging enforcement	★ ★ ★ ★	\$\$\$	Low	Medium
1.4 General drowsiness and distraction laws	★	Varies	High <sup>††</sup>	Short

<sup>†</sup> Effectiveness proven for nighttime and passenger restrictions

<sup>††</sup> Included under reckless driving; use of explicit drowsiness and distraction laws is low



# Graduated Driver Licensing

Rating	State young passenger restriction
Green	Limit of zero or one young passengers without adult supervision
Yellow	Limit of two or more young passengers without adult supervision
Red	No limit on young passengers

Rating	State learner's permit mandatory holding period
Green	≥12 months
Yellow	6-11 months
Red	<6 months

Rating	State unrestricted licensure age
Green	Nighttime and young passenger restrictions existed and were lifted for drivers aged ≥18 years
Yellow	Nighttime and young passenger restrictions existed, and one or both were lifted for drivers between ages 16 years, 7 months and 17 years, 11 months
Red	Nighttime and/or young passenger restrictions were lifted for drivers aged ≤16 years, 6 months; OR only one or no restriction existed

Rating	State nighttime driving restriction
Green	Began on or before 10:00 pm and ended on or after 5:00 am
Yellow	Began between 10:01 pm and 11:59 pm
Red	Began on or after midnight OR no restriction

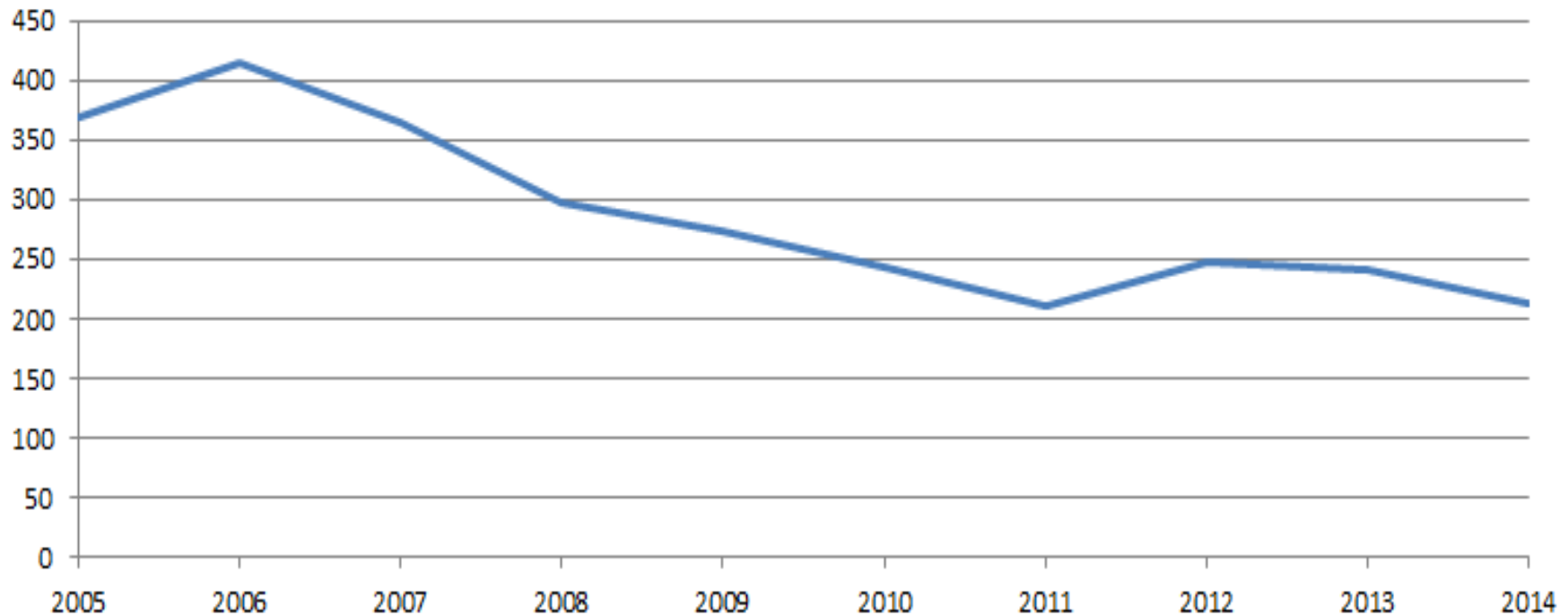
Rating	Minimum age for state learner's permit
Green	≥16 years
Yellow	14 years, 7 months through 15 years, 11 months
Red	≤14 years, 6 months

# 14-18 Year Old Fatal & Injury Crash Data

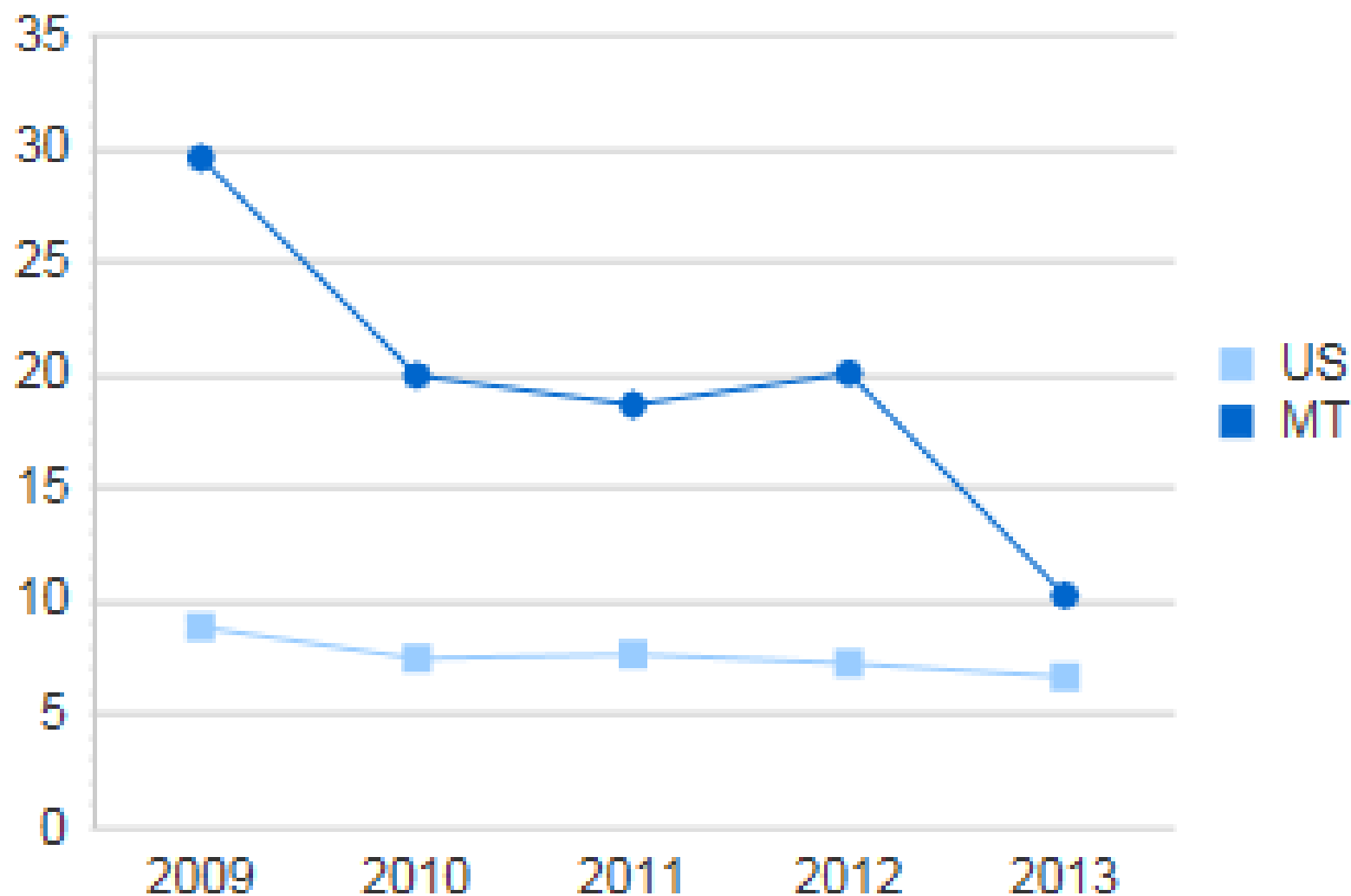
Plot Options

*Fatal and All Injury Crash*

**Fatal and All Injury Crash**

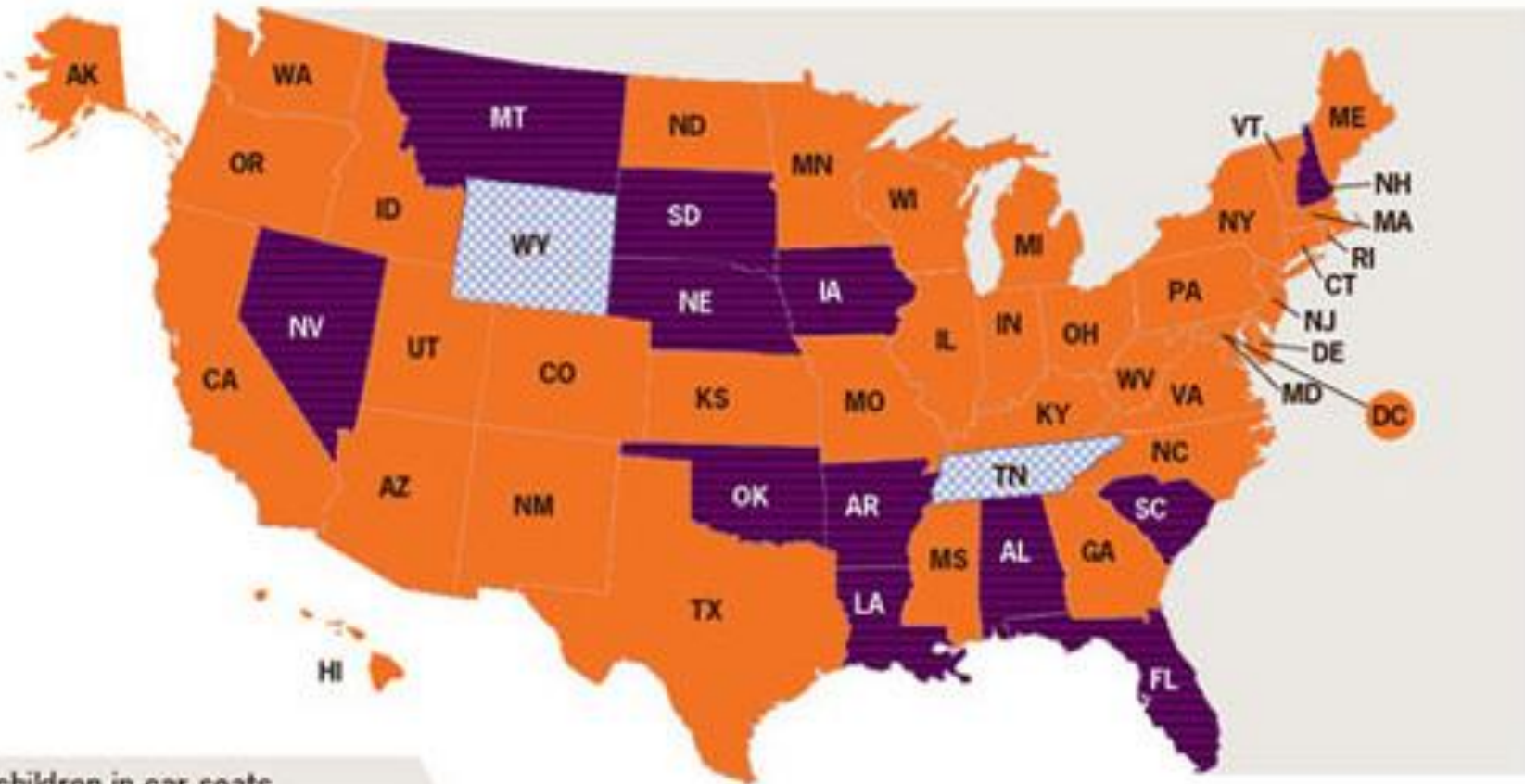


# Motor vehicle-related death rate among drivers aged 15-20 years (per 100,000 population)



Source: National Highway Traffic Safety Administration (6)

# Car/Booster Seats



Law covers children in car seats or booster seats through:

■ Ages 0-5 ■ Ages 6-7 ■ Age 8

# Car Seat Policy Rating

Rating	Age requirement for use of child passenger restraints
Green	Children through age 8 years
Yellow	Children through age 6 or 7 years
Red	Children aged 5 years or younger

# Car Seat Countermeasures

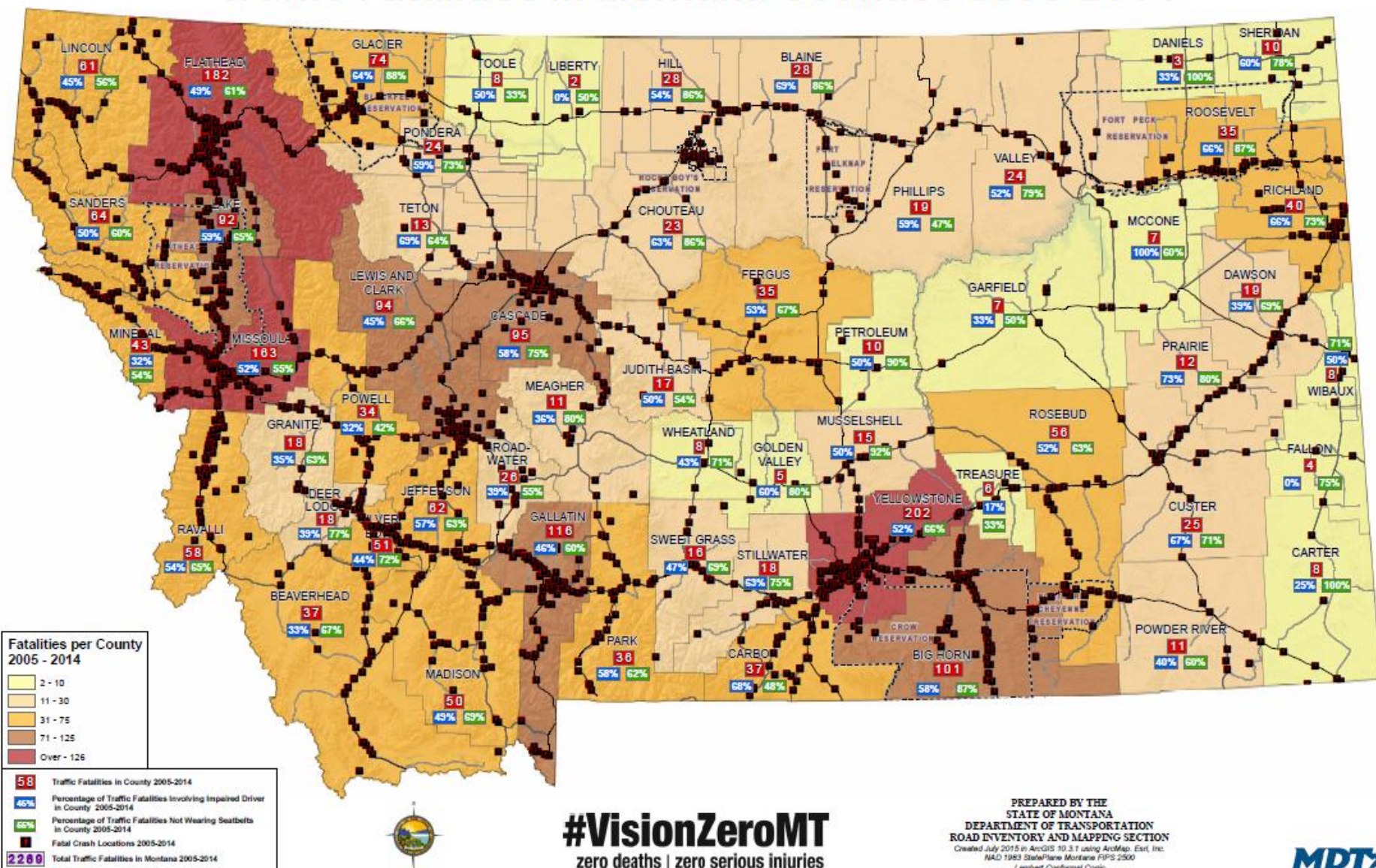
- States should consider proven strategies for increasing car seat, booster seat, and seat belt use and reducing child motor vehicle injuries and deaths. Options for effective strategies include:
  - Child passenger restraint laws that require car seat or booster seat use for children age 8 and under or until 57 inches tall (4 ft 9 in), the recommended height for proper seat belt fit.
  - Car seat and booster seat give-away programs that include education for parents or caregivers.
- Increase the number of certified [Child Passenger Safety Technicians](#).
- Partner with researchers to develop and evaluate programs to address racial/ethnic differences in getting children buckled up.

# Car Seat Technician Trainings

- **April 6-9, 2016**  
Bozeman, MT Scott Mueller 582-2350
- **April 26-29, 2016**  
Missoula, MT Wendy Olson 751-8106
- **May 4-5, 2016 TECH/INSTRUCTOR UPDATE**  
Helena, MT Pam Buckman 444-0809
- **June 8-11, 2016**  
Billings, MT Koren Bloom 259-9601
- **July 11-14, 2016**  
Glendive, MT Tracie Kiesel 324-1072
- **July 14, 2016 1-Day Technician Update**  
Glendive, MT Tracie Kiesel (406) 324-1072



# Traffic Fatalities in Montana Counties 2005-2014





Thank You!

Jeremy Brokaw

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444-4126